

ENGLISH TRANSLATION AND DRAWINGS

FOR

JAPANESE PATENT DOCUMENT

56-136650

## Specifications

### 1. Name of invention.

Electric vacuum cleaner

### 2. Scope of the idea covered under this application

This type of vacuum cleaner features a fan motor located in the main unit. All of the dust is trapped by the filter in the easy to remove and replace dust chamber. The dust in the chamber can be compressed using the external compressor handle located between one end of the dust chamber and the main handle to operate the dust compressor.

### 3. Detailed explanation of this idea

This invention is an electric vacuum cleaner with a dust chamber that compacts the dust with a dust compressor as mentioned above to reduce the chance of unexpected operation of said dust compressor.

In order to collect the dust effectively, some current electric vacuum cleaners may include a dust compressor in the dust chamber. If the protruding handle is operated by mistake, or if the handle is bumped during use such as bumping into furniture, the dust compressor may be operated inadvertently.

Then when the dust compressor operates during normal cleaning, the dust in the chamber can backflow into the back of the dust compressor, resulting in the loss of function of the compressor. This has been a problem with current dust compressors.

This invention improves the positioning of the external handle of the dust compressor. By improving in this area, the above mentioned problem can be solved. A practical example shown in the following charts.

As shown in the chart, for this upright style vacuum cleaner there is a handle (1) attached to the main unit (2), and below that is the suction unit (3). There is a space at the bottom of the main unit (2) where the fan motor (4) is placed. The open front, boat shaped upper case (5) is mounted above this. (6) is a partition; (7) is the air inlet (8) is the main suction inlet on the back of the case (5) where the hose (9) coming from the suction unit (3) attaches. (10) is the exhaust outlet. (11) is the brush agitator which is mounted in the suction area (3) and is turned by belt (12) attached to the fan motor (4).

(13) is the dust chamber, which is easy to remove from the case (5), and replace, with its lower lip (14) fitting into a groove (15) in the partition (6), and pushed flush with hole (17) at the top of the case (5). (13) is then secured by the latch (16) which is mounted above the handle(18) to the top of the case.

The dust chamber (13) which empties on the bottom, has a fitting on the back which connects with the suction inlet (8) and backing (19)

connecting with the case suction inlet (20). (21) is a flap to prevent backflow. (22) is an easy to replace filter which fits in the bottom of the dust chamber (13). (23) is the dust compressor which is normally held above the case suction inlet (20) by the spring (24). The dust compressor (23) is operated by the compressor handle (25) located between the main handle (18) and the dust chamber (13).

Operation starts with the action of the agitator brush (11) mounted in the suction area (3) loosening the dust. The suction from the fan motor (4) then creates suction which pulls the dust through the hose (9), through the air outlet (8), the case suction inlet (20), into the dust chamber (13), and then to the filter (22). As the dust builds up in the dust chamber (13), when necessary, the dust may be compressed using the compressor handle (25) to compress the dust with the dust compressor (23) and increase the amount of dust that can be collected.

Because the compressor handle (25) is below the main handle (18), you are not likely to operate it by mistake. It is also not likely to be bumped during routine cleaning. In other words, the main handle (18) protects the compressor handle (25).

The operation of the upright electric vacuum cleaner has been explained in the above example, however, a similar dust compressor handle could easily be applied to any types of vacuum cleaners.

In this manner, by putting the external compressor handle for the dust chamber below the handle for the dust chamber for this invention, you can reduce the chance of malfunction of dust compressor because of dust compressor being operated during normal cleaning, and the dust in the chamber backflowing into the back of the dust compressor, with no additional parts and a simple structure.

4. Simple explanation of the charts

Chart 1 shows a simple side view of a practical example of this invention, an upright type electric vacuum cleaner. Chart 2 is a side view showing the dust chamber removed. Chart 3 shows a cross section view.

2...Main Body                          4...Fan Motor  
13...Dust Collection Container (Dust Chamber)                  18... main  
handle    22...Filter                          23... dust compressor                  25...  
compressor handle

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Chart 1

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Chart 2

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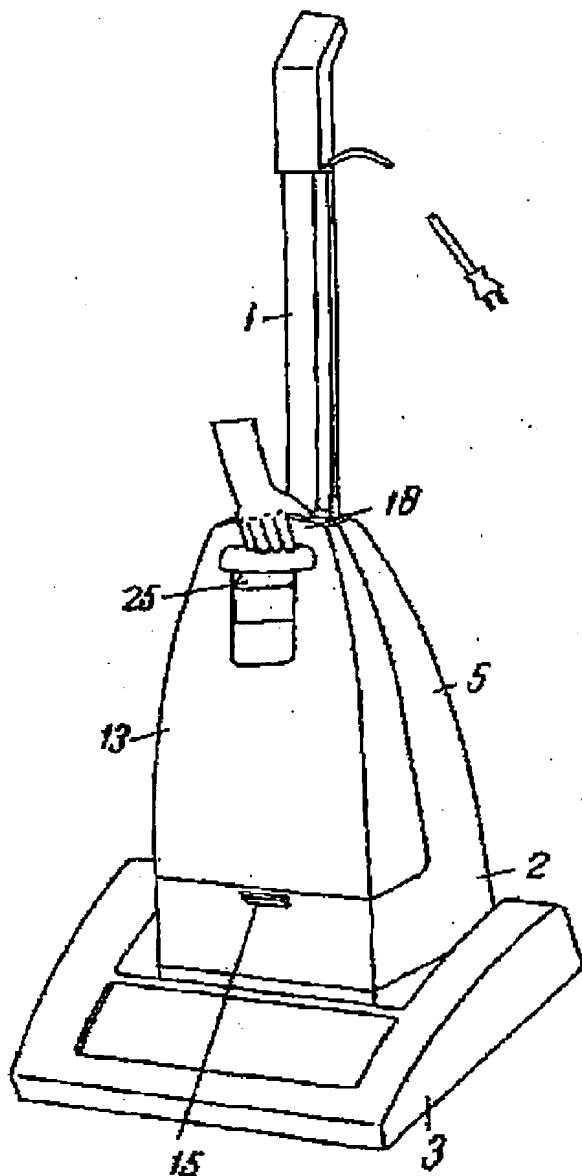
Chart 3

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第 1 図



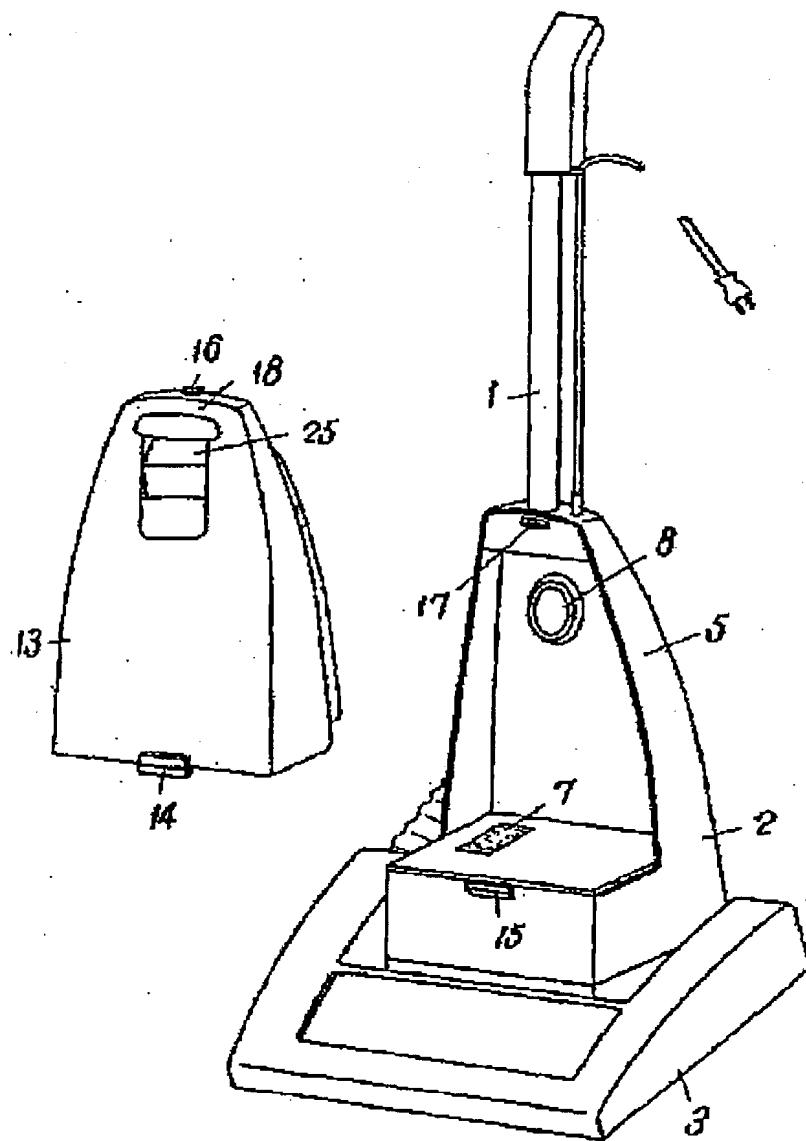
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第 2 図



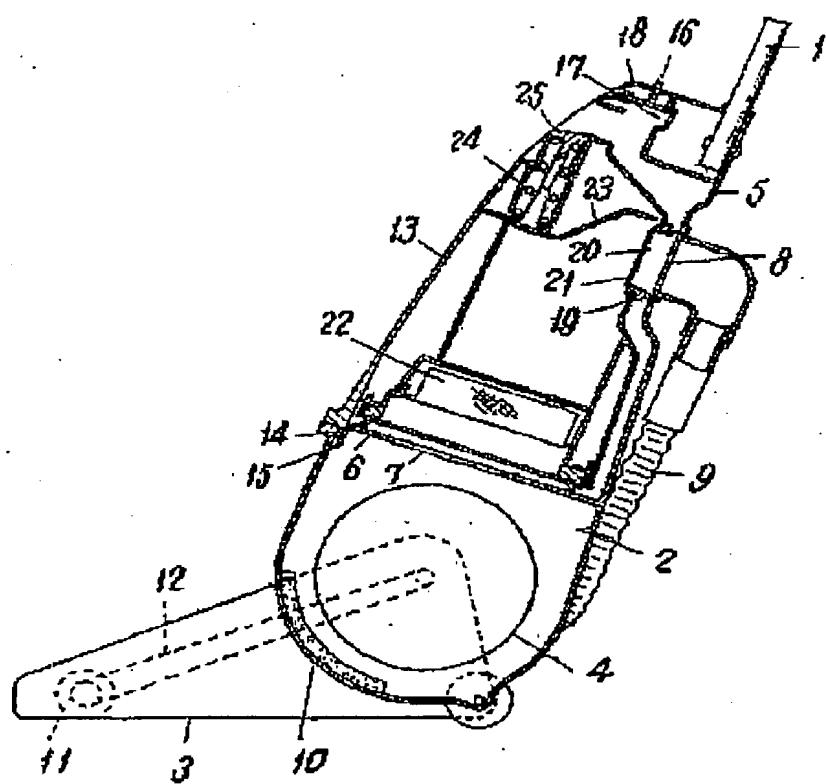
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第 3 図



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